

TORNADO NEAR SYRACUSE, N. Y.

By MORGAN R. SANFORD, Local Forecaster.

A violent and destructive tornado passed from west to east about 2 miles north of the city line and 5 miles north of the Weather Bureau office in Syracuse, N. Y., at 5.25 p. m. Sunday, September 15, 1912. At the local office the barometer fell with the approach of a low-pressure area that was over Indiana in the morning from 29.47 inches at 8 a. m. to 29.18 inches at 5 p. m., when it rose quickly 0.05 inch and then fell slowly to 29.18 inches at 10 p. m., after which it rose steadily. The weather map based on the telegraphic reports at 8 p. m. indicated that the center of the western depression had advanced from Indiana to northern New York during the preceding 12 hours. The temperature ranged between 75° and 80° during the afternoon, but fell about 10° between 5 and 6 o'clock. The wind had been very light from the east and south for 12 hours, but shifted to northwest at 5.15 p. m. and attained a velocity of 18 miles per hour and then became light again soon after 6 p. m. The sky was clear in the morning, followed by increasing cloudiness and thunderstorm conditions in the afternoon, with occasional light rain; and steady rain began at 5.45 and continued until 7.15 p. m., during which time 0.55 inch of rain fell. The day was exceedingly humid and oppressive.

In the vicinity of Cross Lake a severe thunderstorm was observed at about 4 p. m., and it first attained destructive violence when a few miles west of Long Branch, where buildings were damaged and trees blown down. It then continued eastward, either uprooting or breaking maple, oak, and chestnut trees, many of them more than a foot in diameter, and destroying or damaging about 90 buildings, killing live stock, injuring 40 persons, and causing the death of 3. The path of destruction was about 10 miles long and 400 to 600 feet wide, although seeming wider in places on account of occasional curves in the path of advance.

Some observations were recorded by Mr. A. Charles Armstrong, of Warner, N. Y., who estimated that the storm advanced about 7 miles between 4.10 and 4.45 p. m. It was passing 2 miles north of him when the first building was unroofed at 4.35 p. m. It was then one-fourth mile in length and took about one minute to pass a given point. His description would indicate a large anvil-shaped cloud above, with black muff-shaped mass below, rotating upward in front with great rapidity. Lightning played from the overhanging cloud in front of rotating mass, and rain followed. A shower that was entirely separate, and following at a distance of 3 or 4 miles behind the other, passed over the observer at 4.45 p. m. and cut off the view.

The greatest damage was done at Long Branch, a pleasure resort on the outlet of Onondaga Lake, 7 miles northwest from the common center in Syracuse and 3 miles from the New York State Fair Grounds. At that place hundreds of trees were blown down, several buildings damaged, the trolley station carried away and entirely destroyed, two cars loaded with passengers about to return to the city were overturned and about 30 people injured and 2 men, William Mathewson and George Dopp, were killed. Continuing up the outlet, the Syracuse University boathouse was completely wrecked and all boats and oars destroyed. The tornado then

passed over the foot of Onondaga Lake, damaging boats, boathouses, and cottages, and crossed the fields to the Cold Springs Road, along which buildings were damaged and fruit and shade trees broken. The substantial farm buildings owned by Thomas Bennett, about 1 mile northwest of Liverpool, were completely destroyed. The side walls and partitions of the house were swept from the floor structure and sills, which were moved southward on the cellar walls about half the width of the building. The family in the house consisted of the father, mother, and invalid daughter. The father and mother were attempting to close the windows on the second floor when the storm struck them. Then Mrs. Bennett was carried through a west window and was afterwards found in a shade tree which had fallen with its top to the south, and Mr. Bennett landed on ground to the north of the house, but the daughter was found unconscious on the north wall of the cellar. The path of destruction continued across the Phoenix and Clay Roads and the Syracuse & Watertown Branch of the New York Central Railroad, past the Waterbury schoolhouse to Pitcher Hill, about 5 miles east of Long Branch, where Charles Chapman, in attempting to protect his store, was hit by flying pieces of wreckage and killed. Here many buildings were carried away. The home of U. H. Wendell was lifted from its foundations, turned part way around, inverted, and deposited almost on its former site with roof downward, and the family escaped from a window by walking on the ceiling. The storm played many peculiar pranks and caused many thrilling experiences, but only a few can be mentioned in this connection. The loss in buildings, live stock, trees, and crops will probably exceed \$100,000.

From his home on the Cicero Plank Road, Mr. J. C. Thorpe observed the tornado as it passed 1,000 feet north of him at 5.25 p. m. At that time the electric storm had separated and run ahead and had entirely passed before the tornado arrived. The funnel cloud could be plainly seen as a grayish, swaying body, pendant from a darker mass from which debris could be seen spreading out above. In the distance it had resembled the smoke arising from a burning building. The tornado was followed by a heavy rain. One near the path of the storm heard a rushing, roaring sound, but others in the wreckage heard a shriek and roar in which the breaking of trees and buildings resembled musketry, and one mentioned an outward pressure and a bursting sensation in the ears.

A somewhat sinuous path was described between Long Branch and Pitcher Hill, but the general direction was south 87° east, and in general on the extreme right the trees fell with their tops to the east and on the extreme left with their tops to the west. The confusion was greater near the central line, where as many as five tree trunks were sometimes piled one upon another at different angles. Just at the north of the line of destruction at Long Branch a number of large trees fell with their tops to the south, and at another point, about 4 miles farther east, fruit and shade trees were broken that stood 200 feet north of the path of the tornado. It is reported that a violent north wind struck the latter place just before the tornado passed.

This is the first instance known of a violent tornado in this immediate vicinity, and it is remarkable that, although several hundred persons were in the path of the storm, only three were killed.